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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,998	04/27/2001	Joseph A. Zierolf	200017 USA	1645

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EXAMINER

LABAZE, EDWYN

ART UNIT	PAPER NUMBER
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2876

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/843,998

Applicant(s)

ZIEROLF, JOSEPH A.

Examiner

EDWYN LABAZE

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-19, 21-28, 30-48 and 50-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-16, 30-32, 50-52 and 70-72 is/are allowed.
- 6) ☒ Claim(s) 1-12, 17-19, 21-28, 33-48 and 53-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Receipt is acknowledged of amendments filed on 1/07/2003.
2. Claims 1-12, 14-19, 21-28, 30-48, 50-72 including newly added claims 70-72 are presented for examination.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-12, 17-19, 21-28, 33-48, and 53-55 is rejected under 35 U.S.C. 102(b) as being unpatented by Thompson et al. (U.S. 5,682,099).

Re claims 1, 17, and 37: Thompson et al. teaches method and apparatus for signal band-pass sampling in measurement-while-drilling applications comprising of a responding device, which in art can be a logging device/electronic circuit adapted to be connected to an asset (col.7, lines 25+); and an antenna 213, 211 electrically connected/coupled to the responsive device/oscillator or drive circuits (col.14, lines 29+) and positioned about the exterior of the asset/tabular 2401 (col.5, lines 27+), further comprising a tubular 2401 (col.7, line 43), a collar (col.7, lines 46-67 and col.8, lines 1-47; col.9, lines 11-21).

Re claims 2, 6, 18, 22, 38, and 42: Thompson et al. discloses an apparatus and method, wherein the responding device is a radio frequency identification device 224 (col.18, lines 10+).

Re claims 3, 7, 19, 23, 39, and 43: Thompson et al. teaches an apparatus and method, wherein the radio frequency identification device is passive (col.14, lines 45+).

Re claims 4, 10, 26, 40, and 46: Thompson et al. discloses an apparatus and method, wherein the antenna extends substantially around the outer periphery of the asset (col.5, lines 27+).

Re claims 5, 21, and 41: Thompson et al. discloses an apparatus and method, wherein the asset or tubular 2401 has a groove/cavity 2418 in the outer surface thereof (col.9, lines 22+) and the responding device or electronic housings and antenna 2518 are positioned within the groove/cavity 2512, 2514 (col.10, lines10+).

Re claims 8, 24, and 44: Thompson et al. discloses an apparatus and method, wherein the groove extends substantially around the outer periphery of the asset (col.6, lines 1-12).

Re claims 9, 25, and 45: Thompson et al. teaches an apparatus and method, wherein the groove/recess is generally annular/circumferential recess or a ring-shaped form (col.6, lines 1-34).

Re claims 11, 27, and 47: Thompson et al. discloses an apparatus and method, further comprising a sealant/nitrile rubber positioned in the groove/recess so as to surround and secure the responding device and antenna in the groove (col.6, lines 20+). One skilled in the art would agree that the sealant could be made of various materials/solutions providing that the antenna and electronic circuits in the groove/recess are adequately protected.

Re claim 12, 28, and 48: Thompson et al. teaches an apparatus further comprising of a second antenna electrically connected/coupled to the responding device (col.17, lines 27+).

Re claims 33, and 53: Thompson et al. teaches an apparatus and method, wherein the tubular 25 is drill pipe 21 and the fluid conduit is a drill string 19 for use in a subterranean well 1 (col.4, lines 37+).

Re claims 34, and 54: Thompson et al. discloses an apparatus and method, wherein the tubular is tubing and the fluid conduit is a tubing string for use in the subterranean well 1 (col. 1, lines 23-43).

Re claims 35, and 55: Thompson et al. teaches an apparatus and method, wherein the tubular 2401 is pipe and the fluid conduit is a pipeline (See Fig. # 1A of Thompson et al.).

Re claim 36: Thompson et al. discloses an apparatus and method, further comprising a tool which could be a sensor or logging electronic circuits connected to the tubular 2501 (col. 10, lines 1-35; and col. 17, lines 1+); a second responding device/drive circuits 203, 205 connected to the tool (col. 17, lines 1+); and a second antenna 211, 213 electrically coupled to the responding device (col. 17, lines 27+).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 56-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (U.S. 5,682,099) in view of Schuh (U.S. 5,836,406)

Re claims 56-59: The teachings of Thompson et al. have been discussed above, and further disclose an asset generally tubular 25 (col. 5, lines 27+).

Thompson et al. fails to disclose a transceiver positioning in the proximity interior and /or exterior of the tubular.

Schuh teaches adjustable stabilizer for directional drilling, which includes a transceiver (col.5, lines 1+).

In view of Schuh.'s teaching, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ at least one transceiver into the teaching of Thompson et al. wirelessly connected to a bus allowing the transfer of electric impulses and for transmitting and receiving radio frequency signals transmitted as a pulse or modulation signal. Transceivers, electronically designed of transmitters and receivers, receive the RF signals from an antenna, demodulate those RF signals to extract the information they carry and transmit the modulated RF signals via antenna. The information/data transmission can occur to and/or from the exterior and/or interior of the tubular. Furthermore, such modification would have an obvious extension as taught by Thompson et al. and therefore an obvious expedient.

Re claim 60: Thompson et al. discloses an apparatus and method, wherein the responding device is a radio frequency identification device 224 (col.18, lines 10+).

Re claim 61: Thompson et al. teaches an apparatus and method, wherein the radio frequency identification device is passive (col.14, lines 45+).

7. Claims 62-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (U.S. 5,682,099) in view of Schuh (U.S. 5,836,406).

Re claims 62-65, and 68-69: The teachings of Thompson et al. have been discussed above.

Thompson et al. fails to show positioning a transceiver and tubular, wherein a responding device and antenna connected in the proximity of each other without regard to the rotational orientation.

Schuh teaches adjustable stabilizer for directional drilling, which includes a rotational orientation stabilizer body 13 (col.4, lines 49-67).

In view of Schuh.'s teaching, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate a rotational orientation stabilizer into the teaching of Thompson et al. so as to control and neutralize the true data regarding the position and rotation of the tubular. Furthermore, such transceiver would permit communication between the responding device and the antenna, and monitor changes in all direction/trajectory of the tubular. Moreover, such modification would have been an improvement of the teaching of Thompson et al. and therefore an obvious.

Re claim 66: Thompson et al. discloses an apparatus and method, wherein the responding device is a radio frequency identification device 224 (col.18, lines 10+).

Re claim 67: Thompson et al. teaches an apparatus and method, wherein the radio frequency identification device is passive (col.14, lines 45+).

Allowable Subject Matter

8. Claims 70,14-16, 71, 30-32, 72, 50-52 are allowed.

9. The following is a statement of reasons for the indication of allowable subject matter: Although the prior art of record, Thompson et al. teaches a well perforator system and method, comprising of a responding device or receiver, which is a radio frequency identification device with passive communicating by means of electromagnetic energy, an antenna that extends substantially around the outer periphery, a groove or conduit on the outer surface in the form of an annular or a ring-shaped, and extended around the outer periphery, and that the assembly has

a sealant positioned on each side of the housing and secures the antenna, also a second antenna but fails to teach a second antenna electrically connected with a responding device along the inner periphery of the tubular. These limitations in conjunction with other limitations in the claims were not shown by the prior art of record.

Response to Arguments

10. Applicant's arguments filed on 1/07/2003 have been fully considered but are moot in light of new ground of rejection.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kruspe et al. (U.S. 6,429,653) discloses a method and apparatus for protecting a sensor in a drill collar.

Poitzsch et al. (U.S. 6,366,089) teaches nuclear magnetic resonance locating azimuthal resolution.

Sezginer et al. (U.S. 5,629,623) discloses pulsed nuclear magnetism for information evaluation while drilling.

Krokstad et al. (U.S. 5,877,996) teaches transducer arrangement.

Chang et al. (U.S. 5,923,167) discloses pulsed nuclear magnetism for information evaluation while drilling.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDWYN LABAZE whose telephone number is (703) 305-5437. The examiner can normally be reached on 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (703) 305-3503. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

el
Edwyn Labaze
Patent Examiner
Art Unit 2876
March 13, 2003



THIEN M. LE
PRIMARY EXAMINER